

CLAIMS

1. A floating slider including an opposing face opposed to a storage medium, the opposing face having
5 a crown surface like an outer columnar surface having an axis extending radially of the storage medium, the floating slider being floated off the storage medium by air flowing in between the storage medium and the opposing surface,

10 wherein the following expression is satisfied where d represents a crown thickness defined as a distance from an vertex of an arc in a section of the crown surface to a chord of the arc, and L represents a slider length defined as a length of the opposing face parallel to the
15 chord:

$$250 \text{ (nm/mm)} \times L \text{ (mm)} \leq d \text{ (nm)}$$
$$\leq 250 \text{ (nm/mm)} \times L \text{ (mm)} + 1500 \text{ (mm)}$$

2. The floating slider according to Claim 1, wherein
20 the opposing face has an air entering end formed with a tapered flat surface having a length of 0.3 mm through 0.5 mm toward the chord and crossing the chord at an angle of 0.5 degrees through 1.0 degree.

25 3. The floating slider according to Claim 1, wherein the opposing face has an air entering end formed with a recessed step having a depth of 1 μm through 5 μm .

4. The floating slider according to Claim 1, wherein the floating slider is a monorail slider in which the entire crown surface is formed as a single surface.

5 5. The floating slider according to Claim 1, wherein the slider length is 2 mm through 6 mm, a slider width defined as a distance of the opposing face radially of the storage medium is 1.2 mm through 5.0 mm, and the crown thickness d is 500 nm through 3000 nm.

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6. The floating slider according to Claim 1, wherein the slider length is approximately 6 mm, the slider width defined as a distance of the opposing face radially of the storage medium is approximately 4 mm, and the crown
15 thickness d is 1500 nm through 3000 nm.

7. A magneto-optical storage device including a light condenser for formation of a laser spot on a storage medium and a magnetic field generator for generation of
20 a magnetic field at a region where the laser spot is formed,

wherein the light condenser and the magnetic field generator are mounted on the floating slider according to Claim 1.